Claims

1. A wavelength conversion element in which a plurality of polarization inversion regions are formed in a quartz crystal substrate in a periodic manner, and light that is incident from one end of the quartz crystal substrate is subjected to a wavelength conversion by being caused to pass through the plurality of polarization inversion regions, this wavelength conversion element being characterized in that a high-refractive-index region is formed so that this region passes through the plurality of polarization inversion regions in the direction of light transmission.

2. The wavelength conversion element according to Claim 1, which is characterized in that the high-refractive-index region is formed by converting the area around this region into a low-refractive-index region by means of ion implantation.

3. The wavelength conversion element according to Claim 1, which is characterized in that the high-refractive-index region is formed by a ridge type waveguide.

4. The wavelength conversion element according to Claim 3, which is characterized in that the ridge type waveguide is formed by selective reactive ion etching.

5. The wavelength conversion element according to Claim 3, which is characterized in that the ridge type waveguide is formed by mechanical working.